

HEADQUARTERS

Aeronautical Systems Division

AIR FORCE SYSTEMS COMMAND

UNITED STATES AIR FORCE

WRIGHT-PATTERSON AIR FORCE BASE, OHIO

RLA
comment

53700

REPLY TO
ATTN. OF: ASRKEA

3 October 1961

25X1A

SUBJECT: Request for Proposal Nr. 33(657) 62-5065-Q

TO: All Prospective Bidders.

1. Notification of this procurement was published in the Department of Commerce Synopsis of U.S. Government Proposed Procurements, Sales and Contract Awards.
2. The Air Force invites your organization to submit a proposal covering services on subject purchase request in accordance with requirements of the attached technical exhibit. A contract of fourteen (14) months is contemplated; however, if your organization can complete the program in less time your proposal should indicate the shorter period.
3. Please notify this Division within ten days of the date of this letter whether or not you plan to submit a proposal. If a proposal is to be submitted, it must be submitted in two (2) copies and contain, as a minimum, those requirements set forth in the attachments hereto. Said proposal must be postmarked on or before 2 November 1961 and should include the name and telephone number of the individual who will represent your organization in any negotiation that may be required on the procurement.
4. It is anticipated that information concerning contract award will be furnished on or about 31 December 1961.
5. Address your reply to the Aeronautical Systems Division, ATTN: ASRKEA, R. P. Gibson, or telephone Dayton, Ohio, Clearwater 3-7111, Extension 22201.

Richard J. Crane
RICHARD J. CRANE
Contracting Officer

- 4 Atchs
1. Exhibit A
2. Exhibit B
3. Exhibit C
4. Exhibit D

P. R. Nr. 121279 RNR

Date: _____

EXHIBIT A

CONTRAST MODULATION TECHNIQUES

1 April 1961

STATEMENT OF PROBLEM: This procurement will provide for applied research, experimentation, and experimental mock-ups for the investigation and study of methods for enhancing and improving the photographic characteristics of extremely low contrast silver images. These images occur in small selected areas of negatives which have received less than adequate exposure due to cloud shadows, haze, sun angle, and other atmospheric conditions. Because of this condition, it is desired to modulate the contrast or enhance the images of the recorded information by whatever means possible to make this otherwise visually indiscernible information discernible. To overcome these problem areas new enhancement techniques shall be investigated for read out of high acuity, low density, low contrast images for amplification to a more usable level. Methods of contrast and exposure modulation shall be investigated as well as new print out techniques to create and reconstruct the enhanced photographic output.

B. OBJECTIVE:

1. The object of this procurement is to provide the USAF with an applied research technique which will advance the state of the art of the photographic printing process by enhancing very low contrast silver halide images containing high resolution detail produced from extremely high altitude reconnaissance vehicles. Suitable methods for amplification of exposure and contrast scale as well as print out, and image reconstruction techniques shall also be covered under this objective. It is the main intent of this research effort to develop new techniques for the detection of useful information which is recorded on a photograph but is otherwise undiscernible in its normally processed form.

2. This procurement is intended to produce as end items, techniques that will assure detection and reproduction of maximum information content from high resolving negative images, and laboratory test equipment for demonstration of evolved methods of image modulation.

C. AREAS OF CONSIDERATION: Essential research analysis and breadboard experimentation shall be performed in the fields of image scanning, exposure and contrast amplification, and print out techniques to insure an adequate examination of all significant factors and their relationship to over-all system quality and resolution requirements.

P. R. Nr. 121279 RNR

Date: _____

The scanning of micro-sized images, the modulation of signal impulses with respect to amplification of low contrast fine detail image structures, and subsequent print out of the reconstructed image for the purpose of meeting the work requirement of paragraph "D" of this attachment will necessitate a state of the art break through. To be completely effective it will be necessary to investigate various methods and techniques of image modulation to obtain optimum photographic records.

Once suitable image amplification techniques are uncovered the remainder of the effort shall be directed towards the fabrication of laboratory test equipment for demonstration of feasibility of the uncovered methods.

D. WORK REQUIREMENTS:

1. Contractor shall investigate methods of scanning and reading high resolution micro-images having very low contrast response. Scanning techniques shall be developed for reading images having density differences of only 0.01 and having resolution of up to 200 lines per millimeter. Methods of read out shall include the requirement for reading images over a density range from base fog to 3.0 with particular emphasis for reading very low density images (from base fog to 0.5 density).
2. Methods shall be investigated for amplification of signal impulses to usable levels for achieving the required photographic characteristics for visual interpretation. Techniques for modulating exposure and contrast response and for expanding and improving the tonal scale and density level of the original image shall be investigated. Also included shall be methods for amplifying the fine detail while at the same time suppressing the coarse details and grain noise, making it possible to identify more easily the objects that were photographed.
3. Printing techniques for reconstruction and reassembly of the enhanced photographic image shall be investigated. Various optical and electrical techniques shall be investigated for use in modulating a printing light source which in turn is used to create the modulated photographic output.
4. Contractor shall furnish a set of test equipment for demonstration of feasibility of proven methods of image enhancement. This equipment shall be prototype laboratory equipment capable of scanning, amplifying, and printing a 1 by 1 inch selected portion of test negatives and aerial negative images. The equipment shall accept roll negative materials up to 9-1/2 inches in width and 1000 ft in length.

EXHIBIT B

P. R. Nr. 121279 RNR
Date: 1 April 1961

PART I - ITEMS TO BE DELIVERED

- ITEM I MONTHLY CONTRACT STATUS REPORTS - in four (4) copies. These informal letters shall contain a brief, concise statement of the progress of the work with both positive and negative results obtained during the reporting period. Included shall be a statement of manhours expended by each participant, by name; the cumulative percent completion towards the objective of the contract; and the anticipated work plan for the next reporting period.
- ITEM II ASD TECHNICAL REPORT, not to exceed fifty (50) copies, prepared in accordance with ARDC Manual Nr. 5-1, dated June 1957, incorporated herein by reference. This report shall contain details of all technical work accomplished and information gained under the contract, including all engineering drawings, schematic diagrams, etc., procedures followed and recommendations for future work.
- ITEM III PRESENTATION MATERIAL, one (1) set of flip charts (25 x 31 inches) and two (2) sets each of 35 mm and 3- $\frac{1}{4}$ X 4 inch mounted glass slides. A sufficient number of slides will be prepared to brief scientific and management personnel on the purpose and results of the subject research. All essential work and significant achievements will be included. Charts will be submitted to the Air Force project engineer in rough draft form before materials are prepared in final form.
- ITEM IV One (1) laboratory model for demonstrating the feasibility of image enhancement techniques developed by the contractor.

Proposals will be evaluated strictly and only in accordance with the following criteria:

- (1) Describe in detail known methods and techniques which will be investigated under the contract in order to obtain the proper level and quality of image enhancement required.
- (2) Describe in detail the method of approach to be used in meeting the specific requirements of this research program. Describe in detail experiments and laboratory apparatus which will be used to develop or evaluate each image enhancement technique, with respect to resolution, contrast enhancement, read out rate, print out rate, and other critical design factors. In addition, the reason or philosophy for selecting the proposed approach will be discussed.
- (3) Provide sufficient information and discussion to show compliance with the requirements of this effort. Broad statements saying "we will comply" or "will meet all requirements" will not be considered as acceptable evidence of intention to meet the requirements of Exhibit A.

EXHIBIT B CONT'D

- (4) Provide a detailed description of any unique ideas, literature survey, or other background information available to the contractor which would aid in the accomplishment of the outlined objective. This description shall be confined to a technical discussion of pertinent information.
- (5) Describe in detail the number and type of research personnel who will be assigned to this program. Include a discussion of the experience and the expected contribution of each person.
- (6) Describe in detail the type of equipment that will be required and the current availability of same to the contractor.
- (7) The approximate weight of each category of evaluation will be as follows:
 - (a) Understanding of the problem 25
 - (b) Method of approach 35
 - (c) Compliance with requirements 10
 - (d) Special technical factors
(Unique ideas, background, survey,
etc.) 10
 - (e) Number/Type of Personnel 20

REQUEST FOR PROPOSAL
NUMBER _____

EXHIBIT _____ "C"
DATE _____

GENERAL INSTRUCTIONS FOR PREPARING
TECHNICAL PROPOSALS

1. General:

a. Your technical proposal, which will be the most important consideration in the award of a contract, should be specific and complete. Dollar values should be completely removed so that preliminary evaluation may be made without regard to cost. The difficulty of predicting all engineering problems in advance is understood, and it is appreciated that expenses loom large when advance proposals are prepared. Proposals therefore, should be practical. Elaborate format, binders and the like are neither necessary nor desired; legibility, clarity, and coherence being very important.

b. The proposals should contain an outline of the proposed lines of investigation, method of approach to the problem, any recommended changes to the technical exhibit, the phases or steps into which this project might logically be divided, estimated time required to complete each phase or step, and any other information considered pertinent to the problem. The proposal should not merely offer to conduct an investigation in accordance with the technical exhibit but should outline the actual investigation proposed as specifically as possible. Further, the technical exhibit is not intended as a statement of work to be accomplished, but rather as an indication of some of the possible approaches to the problem as recognized by this agency. The Contractor is not limited to the suggested approaches but is encouraged to submit his own approaches for equal or even preferred consideration.

2. Format and Specific Content:

a. To aid evaluation of the proposals, it is desired that all proposals follow the same general format and shall at minimum contain the information specified below in accordance with the following general format:

- (1) Table of Contents
- (2) List of Tables and Drawings
- (3) Short Introduction and Summary

(a) This section shall contain an outline of difficulties of the problem and general approach toward solving it.

- (4) Technical Discussion of Approaches

(a) This section shall contain the major portion of the technical proposal. It should be presented in as much detail as possible and contain as a minimum the following:

1. Principles which may be applied in the solution of the problem and an evaluation of the various methods considered with justification for that selected.

Complete and detailed statement of solution, including preliminary design layout, sketches, and other information indicating configuration; and functions of components as applicable.

3. Specific statement of any interpretations, deviations, and exceptions to the exhibit.

4. Degree of success expected and major difficulties anticipated.

(5) Program Organization

(a) This section should show the relationship of this program to the overall company structure and the function and responsibilities of major subcontractors and contain as a minimum the following:

1. General experience and background of bidder/offeror on similar projects. Available specifications, photographs, technical descriptions or other data are welcomed, and may be submitted to support the proposal.

2. Extent of subcontracting anticipated, and preliminary information on the availability of subcontract sources.

(6) Personnel Qualifications

(a) This section shall contain specific personnel to be assigned for direct work on the project and as direct technical supervisors, plus:

1. Experience of these personnel on similar projects or equipment.

2. General qualifications of these personnel, including education and specific accomplishments.

3. Percent of total time each will be available for this project for the duration estimated by the bidder/offeror.

4. Identify principal project leader.

(b) Statement of additional engineering personnel required for full employment, subcontract, or consultation and source from which they will be obtained. Statement of assurance that proposed additional personnel will be available for work on this contract as specified in the proposal. Alternate personnel sources should be listed if assurances of availability cannot be stated.

(7) Facilities and Equipment Data

(a) This section should include a statement of available plant, equipment, and test facilities proposed for use on this project.

(b) Specific statement of additional plant, equipment and test facilities required for this project together with individual cost and delivery estimates which the contractor will provide from his own resources.

(8) Program Schedules

(a) This section should include the period of performance, proposed duration of project in months, by phases or steps, if applicable, and delivery schedule of all items.

(b) Hourly time estimates by labor classes.

(9) Supporting Data and Other Information

(a) This section should consist of specific concurrence in requirements for reports.

(b) List of Government contracts in this and related fields held in the past, including cost of contract, title, sponsoring agency, and contract number.

(c) Any other pertinent information which will aid in evaluation of the proposal.

3. This exhibit is intended to be general in nature with application to many programs. Although it is intended as a guide, subject to modification as required for the individual program, its content should be adhered to wherever possible.

REQUEST FOR PROPOSAL
NUMBER _____

EXHIBIT _____ "D"
DATE _____

GENERAL INSTRUCTIONS FOR PREPARING
COST AND CONTRACTUAL PROPOSALS

1. General:

a. Your cost and contractual proposal, which will be an important consideration in the award of a contract, should be specific and complete. Proposals should be practical. Elaborate format, binders, and the like are neither necessary nor desired; legibility, clarity, and coherence being more important.

b. Proposals submitted in response to this Request for Proposal will not be returned but will be retained for official record.

2. Cost:

a. The Contractor must submit his cost proposal on the attached DD Form 633-4, or a format in substantially the same detail acceptable to the Contracting Officer, pursuant to ASPR 16-206.

b. The above form shall be completed in the fullest detail possible, with a breakdown of the individual areas to the fullest extent (Labor, Burden, Material, Equipment, Consultants, Subcontracts, and other Direct Costs).

c. The contingent fee certificate on DD Form 633-4 must be completed and signed by an individual authorized to bind your organization contractually; or in the event the DD Form 633-4 is not utilized, the certificate must be reproduced, executed, and returned with your proposal.

(1) AFPI 1-507.1 "If the bidder, by checking the appropriate box provided therefore in his bid, has represented that he has employed or retained a company or person (other than a full-time bona fide employee working solely for the bidder-contractor) to solicit or secure this contract, or that he has paid or agreed to pay any fee, commission, percentage, or brokerage fee to any company or person contingent upon or resulting from the award of this contract, he may be requested by the Contracting Officer to furnish a complete Standard Form 119, Contractor's Statement of Contingent or Other Fees (December 1952 Ed.). If a bidder previously furnished a completed Standard Form 119 (December 1952 Ed.) to the office issuing this invitation for bids (request for quotations), he may accompany his bid with a signed statement (a) indicating when such completed form was previously furnished, (b) identifying by number the previous invitation for bids or contract, if any in connection with which such form was submitted, and (c) representing that the statement in such form is applicable to this bid."

3. Contractual:

a. If your proposal is accepted, the Government will award a standard contract embodying those clauses required by the Armed Services Procurement Regulation, consistent with the type of contract entered into, including Nondiscrimination in Employment and

standard labor clauses. The provisions of a Basic Agreement, if such an agreement is in effect between your organization and the Government, will be utilized if applicable to the proposed work upon specific and complete reference in the proposal. The Air Force proposes to use standard Government clauses on Patent Right, Data, Notice and Assistance Regarding Patent Infringement, Filing of Patent Applications, and Authorization and Consent as appropriate.

(1) Nondiscrimination in Employment - See Attachment hereto.

b. The proposal must include a list of all royalty payments, including description thereof, ~~required~~ in the performance of this work. If not applicable, indicate royalty payments are not applicable in your proposal.

c. In the event facilities under a Government facility contract are to be used in connection with the performance of an ensuing contract, the proposal will include the Facility Contract number, the expiration date of the facility contract, and the name of the agency having cognizance over the facility contract. A statement will also be included in the proposal indicating that the facilities will be available for timely completion of performance under an ensuing contract on a non-interference basis and whether or not your proposal is based on "No Charge for Use" and whether or not you could perform the work in the event use of such facilities is not authorized.

d. List facilities, including their cost, which must be purchased in addition to those presently available. State the accumulated total dollar amount of Government facilities on hand and contemplated as a result of a contract award which are not covered by Government facility contract.

e. List special tooling or test equipment, including their cost, which must be purchased to assure satisfactory completion of the program.

f. Program Schedules. Include the period of performance, proposed duration of project in months, by phases or steps, if applicable, and delivery schedule of all items.

4. Restrictions on Disclosure of Data in Proposals: If you should consider it necessary to restrict disclosure of your data, submitted in response to this Request for Proposal, the following legend will apply:

This data furnished in response to subject RFP, shall not be disclosed outside the Government or be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate the proposal; provided, that if a contract is awarded to this offeror as a result of or in connection with the submission of such data, the Government shall have the right to duplicate, use or disclose this data to the extent provided in the contract. This restriction does not limit the Government's right to use information contained in such data if it is obtained from another source. (Mar. 1958).

Offerors shall mark each sheet of data which they so wish to restrict with the legend set forth above. Proposals received which require restriction of data, which include other than the above will not be acceptable and may be returned to the offeror.

5. Special Instructions:

a. If this procurement is classified, the bidder will return all classified information, including reproductions thereof, to the Contracting Officer concerned, or his duly authorized representative, unless specifically authorized in writing by the Contracting Officer to retain or destroy such classified matter in accordance with applicable security regulations:

(1) On or before the date for opening bids when a bid is not submitted.

(2) Within fifteen (15) days after notification that a bid or a negotiation proposal has been accepted.

(3) At such other times as the Contracting Officer concerned or his duly authorized representative may direct or agree. (Reference: Industrial Security Manual for Safeguarding Classified Information).

b. Because of the nature of the work called for in this procurement, it is not being formally advertised but will be negotiated. The Contracting Officer will select the best overall proposal, based on the technical merit, cost, and other factors. The Government reserves the right to negotiate with any Contractor and to reject as the Governments' interest may appear, any and all quotations and proposals received, or to waive any minor informality in connection therewith.

c. Late Proposals: The Government reserves the right to consider proposals or modifications thereof received after the date indicated for such purpose, but before award is made, should such action be in the interest of the Government.

d. No costs incurred before receipt of a signed contract or specific written authorization from the Contracting Officer can be charged to the proposed contract. Your attention is invited to the fact that the Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds.

e. The term "negotiation" as used herein shall not be interpreted as meaning that offerors will be given the opportunity to revise or lower their original quotation or otherwise modify their original proposal. Offerors are cautioned to carefully review all terms and conditions and specifications of this Request for Proposal prior to submission of bids. The Contracting Officer may consider offeror's original proposal as final without extending privilege to modify or revise quotation or conduct further negotiations.

f. A properly authenticated Certificate of Current Pricing Data will be required for each procurement action exceeding \$100,000.00, and may be required at the Contracting Officer's discretion when lesser amounts are involved. This certificate will be required from the Prime Contractor immediately prior to agreement on negotiated prices, targets, or price revisions.

3 Atchs:

1. Nondiscrimination in Employment
2. DD Form 633-4
3. Cert. of Current Pricing Data

3.

NONDISCRIMINATION IN EMPLOYMENT. (Apr. 1961)

In connection with the performance of work under this contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the said labor union or workers' representative of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, and of the rules, regulations, and relevant orders of The President's Committee on Equal Employment Opportunity created thereby.

(e) The Contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled in whole or in part and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of The President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

(g) The Contractor will include the provisions of the foregoing paragraphs (a) through (f) in every subcontract or purchase order unless exempted by rules, regulations, or orders of The President's Committee on Equal Employment Opportunity issued pursuant to Section 303 of Executive Order No. 10925 of March 6, 1961, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

COST AND PRICE ANALYSIS - RESEARCH AND DEVELOPMENT CONTRACTS <small>(This form is to be used by contractors and subcontractors in response to "Requests for Proposals," for the procurement of research and development services. If your cost accounting system does not permit analysis of costs as required, contact the purchasing office for further instructions.)</small>				FORM APPROVED BUDGET BUREAU NO. 22 - R208 PURCHASE REQUEST NUMBER	
NAME AND ADDRESS OF OFFEROR			TITLE OF PROJECT		
DETAIL DESCRIPTION					
1. DIRECT LABOR <i>(Specify)</i>			ESTIMATED HOURS	RATE/HOUR	TOTAL ESTIMATED COST <i>(Dollars)</i>
TOTAL DIRECT LABOR					
2 BURDEN <i>(Overhead - specify)</i> DEPARTMENT OR COST CENTER		BURDEN RATE	X BASE =	BURDEN (\$)	
TOTAL BURDEN					
3. DIRECT MATERIAL				EST COST(\$)	
TOTAL MATERIAL					
4. SPECIAL TESTING <i>(Including field work at Government installations)</i>					
TOTAL SPECIAL TESTING					
5. SPECIAL EQUIPMENT <i>(If direct charge - specify in Exhibit B, reverse)</i>					
6. TRAVEL <i>(If direct charge)</i>					
a. TRANSPORTATION					
b. PER DIEM OR SUBSISTENCE					
TOTAL TRAVEL					
7. CONSULTANTS <i>(Identity - purpose - rate)</i>					
TOTAL CONSULTANTS					
8. SUBCONTRACTS <i>(Specify in Exhibit A on reverse)</i>					
9. OTHER DIRECT COSTS <i>(Specify in Exhibit B on reverse - explain royalty costs, if any)</i>					
10. TOTAL DIRECT COST AND BURDEN					
11. GENERAL AND ADMINISTRATIVE EXPENSE <i>(Rate % of item nos.)</i>					
12. TOTAL ESTIMATED COST					
13. FIXED FEE OR PROFIT <i>(State basis for amount in proposal)</i>					
14. TOTAL ESTIMATED COST AND FIXED FEE OR PROFIT					

[illegible]

This is to certify, to the best of my knowledge and belief, that in the preparation of the proposal for _____

being (to be) produced under the terms of (contract, proposal, quotation, etc.) No. _____; (i) all actual or estimated costs or pricing data available as of _____ have been considered in preparing the price estimate, and made known to the Contracting Officer or his representative for use in evaluating the estimate, and (ii) any significant changes in the above data which have occurred since the aforementioned date through the _____ of _____ (Date) (Month) (Year)

also have been made known in the price negotiations to the Government negotiator.

Name _____

Title _____

Firm _____

Note that 18 U.S.C. 1001 prescribes criminal penalties for making false representations to the Government. (MAY 1960)